



# Human Science/Modeling and Analysis Data (HSMAD) Project

## Background:

The modeling and analysis community has long recognized that warrior performance data describing combat engagements closer than 100 meters during military operations in urban terrain (MOUT) are very limited. Examples of these data include target detection and weapons firing accuracy; individual and troop movement rates for approaches to urban areas and during building/room clearing operations; and decision making. Additionally, current constructive models only permit the analysis of a limited set of battlefield stressors and insults (e.g., ballistic and chemical casualties, heat stress, fatigue, etc.) on warrior performance. Further, the underlying data to assess these stressors are often rudimentary or incomplete. Therefore, MOUT performance data and other supporting data (e.g., equipment performance characteristics, weather effects, etc.) are critically needed for dismounted warrior modeling and analysis.

## Objective:

To address this recognized need and to support the Army's Warrior Systems Modeling Technology (WSMT) Science and Technology Objective (STO) Team's efforts to develop the Infantry Warrior Simulation (IWARS) constructive model, HSMAD must be obtained through data mining, field and laboratory studies, and subject-matter expert interviews. To fill the identified data gaps and to accomplish this objective, the Natick Soldier Center has teamed with the following organizations for their capabilities in these critical areas: the U.S. Army Materiel Systems Analysis Activity (AMSAA) for weapons effects data and analysis; the U.S. Army Research Laboratory (ARL) and Battelle for human factors expertise; the U.S. Army Training and Doctrine Command (TRADOC) Soldier Battle Lab for test facilities and soldier participants; and Simulation Technologies, Inc. for modeling software and data warehouse development.

## Approach:

The HSMAD Team will achieve the stated objective in the following manner:

- Identify, prioritize, and collect significant human performance data that accurately represent both individual and small units in the close combat/MOUT environment for modeling and analysis efforts conducted under the Warrior Systems Modeling Technology STO and other associated programs;
- Where data are not available, develop methodologies and execute field studies appropriate for collecting dismounted warrior human performance data;
- Provide the data in a timely manner to the Warrior Systems Modeling Technology STO Team for their use in the development, verification, validation, and application of analytic tools; and
- Identify, develop, and implement the on-line Data Access and Retrieval Tool (DART) to ensure access, storage, and maintenance of the data.

## Schedule:

FY01-FY04

## Point of Contact:

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